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Atty. Dkt. G-31

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Michel LEDUC, Philippe MARTIN, and  
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Serial No. : 09/101,049  
Filing Date : June 26, 1998  
GAU : 2418  
Examiner : Mr. D. Graybill  
For : Contactless Electronic Module For A  
Card Or Label

AMENDMENT A

SEP 20 2000

This is in response to the April 13, 2000 Office Action  
(Paper No. 7).

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Please amend:

OCT 30 2000

IN THE CLAIMS:

TECHNOLOGY CENTER 2800

Claim 1. Cancel and rewrite as new claim 25 set forth  
below.

Claim 2. (Amended) Electronic module (6) in accordance  
with claim 25 [1], characterized in that said antenna (2) is  
made up of a spiral [whose outer size is in the region] of 5  
to 15 mm[, preferable in the region of 12 mm, whose end]  
across, and in that said connection comprises terminals  
(11,12) on said antenna are connected to contact pads  
(13,14) of the electronic microcircuit (7).

A/1  
Claim 4, line 4, delete "in the region of 5 to 15 mm,  
preferably"

Claim 5, line 4, delete "in the region of 5 to 15 mm,  
preferably"

Claim 7. (Amended) Electronic module (6) in accordance  
with claim 25 wherein [any of the preceding claims,  
characterized in that] the microcircuit (7) is placed in the  
center of antenna (2) and on the same side of module (6) as  
the antenna, with [the] connection terminals (11,12) of the  
antenna being connected to corresponding, respective contact  
pads (13,14) of module (6) or of microcircuit (7) via  
conductor leads (15).

*f2*  
Claim 8. (Amended) Electronic module (6) in accordance  
with claim 25, wherein [any microcircuit (7) is placed on  
the same side as antenna (2) astride its turns, with [the]  
connection terminals (11,12) of the antenna being connected  
to corresponding, respective contact pads (13,14) of the  
module (6) and of the electronic microcircuit (7) via  
conductor leads (15), and an insulator (16) located [being  
placed] between the microcircuit (7) and at least the  
antenna zone under the microcircuit.

*A2*  
*Cancel*

Claim 9. (Amended) Electronic module (6) in accordance with claim 25, wherein [any of claims 1 to 6, characterized in that] the electronic microcircuit (7) is located [placed] on a [the] side of the module major plane surface (6) with no antenna, with [the] connection terminals (11,12) of the antenna being connected to corresponding, respective contact pads (13,14) of the module (6) or of the microcircuit (7) via conductor leads (15) crossing over wells (23) made in the carrier substrate (1) [of the module] at a [the] level of said connection terminals (11,12) of the antenna.

Claim 10. (Amended) Electronic module (6) in accordance with claim 7 or 8 or 9, wherein [any of the preceding claims, characterized in that] a tuning capacitor (17) is connected in parallel to terminals (11,12) of the antenna to contact pads (13,14) of the electronic microcircuit (7), the value of capacitor (17) being chosen to obtain an operating frequency for module (6) in the range of approximately 1 Mhz to 450 Mhz.

Claim 11, line 2, after "of" add -- the --

Claim 12, line 2, after "of" add -- the --

Claim 13. Cancel.

Claim 14. (Amended) Electronic module (6) in accordance with claim 25, wherein [any of the preceding claims, characterized in that it comprises] on one face of the carrier (10) the [an] antenna (2) is connected to the microcircuit (7), and on the other face of the carrier (10) visible contacts (26) also connected to microcircuit (7), whereby providing [in such manner as to obtain] a hybrid module [card] able to be read and written on via contacts (26) and/or antenna (2).

*M3*  
Claim 15. (Amended) Process for manufacturing an electronic module (6) [in accordance with any of the preceding claims, characterized in that it comprises stages consisting] comprising the steps of:

- on a substrate carrier (1) making a plane spiral antenna (2) of small size provided with connection terminals (11,12);
- fixing on said carrier (10) or said antenna (2) a microcircuit (7) provided with contact pads (13,14);
- making the electric connection between connection terminals (11,12) of antenna (2) and corresponding contact pads (13,14) of the microcircuit[;].

Claim 17. Cancel

Claim 18. (Amended) Process for manufacturing a contactless card comprising the steps [in accordance with claim 16 or claim 17, characterized in that it comprises stages consisting of:

- cutting out, from a carrier (8) of electronic modules, a contactless module (6) provided with an antenna (2) and a microcircuit (7);
- bringing said module (6) opposite an opening (9) of substantially the same size as the module, made in card body (3);
- fixing said module in the opening of the card body.

Claim 19. (Amended) Electronic label, especially intended for object identification, characterized in that it comprises an electronic module (6) of small size, its largest measurement being in the region of 5 to 15 mm, and an electronic microcircuit (7) mounted thereon, [characterized in that it comprises] and an antenna (2) also of small size arranged on said electronic module and connected to said microcircuit (7).

Claim 20. (Amended) Electronic label, characterized in that it is provided with an electronic module (6) in accordance with claim 25 [any of claims 1 to 13].

Claim 21, line 2, delete "or claim 20"

Claim 22. Cancel.

Claim 23. (Amended) Process for manufacturing an electronic label, characterized in that it comprises [solely the stage cossetting of] cutting out the fixed [an] electronic module (6), made in accordance with claim 18 [any of claims 1 to 14, from the] [a] contactless card (1) incorporating such module, in such manner as to leave some substance of card body (3) around the electronic module (6), for the purpose of protecting the module.

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Claim 24. (Amended) Process for manufacturing an electronic label, characterized in that it subsequently comprises the stages consisting of:

- cutting out from a contactless card (1) a first element (28) incorporating an electronic module (6) in accordance with claim 25 [any of claims 1 to 14], to a given shape so as to leave substance around the module;
  - cutting out from a card, [preferably the same contactless card (1),] a second element (29) having the same shape as said first element;
  - assembling said first and second elements (28,29) in such manner that electronic module (6) is incorporated between said elements and protected by the latter.
- AS  
Jewell*

Add the following new claims 25 and 26.

Claim 25. An electronic module comprising:

- a carrier substrate (10) having a major plane surface;
- an antenna (2) mounted on said substrate and having a plurality of turns parallel to the major plan surface;
- an electronic micro circuit (7) connected to said antenna;
- whereby said module is self-contained and may be mounted in a recess in a contactless card (1) or used as a contactless electronic label.

Claim 26. The electronic module according to claim 10, further comprising an insulating layer (16) on the microcircuit, and wherein said capacitor comprises a deposited oxidized silicone layer on said insulating layer (16).  
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REMARKS

After amendment, independent claim 1 has been rewritten as new independent claim 25. In addition to independent claim 25, there are now independent claims 15, 16 and 18. Claims 2, 3, 5-12, 14, 20, 24, and 26 are dependent on claim 25. Claim 15 has been written as an independent claim and is directed to a process of manufacturing a module. Claim 16 has been amended and is presented here as an independent claim directed to a contactless card. Claim 18 has been amended and is presented here as an independent claim directed to a process for the manufacturing of a contactless card. Claim 23 is dependent on claim 18. Claim 19 has been amended and is presented here as an independent claim directed to an electronic label. Claim 21 is dependent on claim 19. Claim 25 is a new independent claim which replaces claim 1. Claim 26 is a new dependent claim dependent on claim 10. Support for claim 26 is in former claim 13.

Turning now to the Office letter, the entire set of claims have been reviewed, substantially amended and in part rewritten. The objection to the improper multiple dependent claims, it is respectfully submitted, with the present submission is now mooted.

All the claims previously on file stood rejected under §102 and/or §103 and the primary reference Fidalgo, Ref. A,

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5,598,032. The rejection is respectfully traversed. Ref. A appears to teach the prior art, as shown in applicants' fig. 1, and as discussed in applicants' description thereof at page 13, line 25, to page 14, line 23. Also, as discussed in the introduction portion of the specification. The Office's attention is called to Ref. A's "antenna (5)" and its relationship to the "electronic module (7)". As shown, for example, in figs. 1-3, 5 and 7. Reference is made to Ref. A, column 4, ¶ beginning at line 11.

The claims have been rewritten and are now directed to a structure that distinguishes over the applied prior art. The dependent claims define additional structure which is not shown nor suggested in the references.

Applicants' attorney requests permission to make at a later time minor changes to the specification and drawings of a purely editorial/grammatical nature.

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In summary, it is respectfully submitted that with the present amendment the application is now in a condition for allowance and a Notice of Allowance is solicited.

Respectfully submitted,

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Certificate under 37 CFR 1.8(a): I hereby certify that this correspondence is being deposited with the United States postal service as first-class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on SEP 20 2000

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